

# Methods, Tools and Data Integrating Discussion

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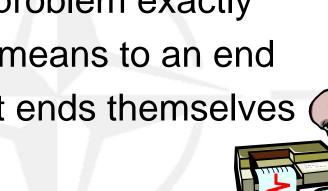
## Models, Tools & Data

- ...come in many forms
- ...have multiple uses



... are means to an end









#### **Review Points**

- Tools may be used in problem formulation, as well as in problem solution
- Tools include methods of thought, as well as computer programs
- The model describes what things are connected and how they are connected
- A tool may allow you to build a model or it may implement a model in a usable way



### **Review Points**

- Try to use the right tool for a given purpose; but, if you have to use a hammer to drive a screw, understand and document the misfit.
- Complex problems usually require linkages of tools. Document the linkages.
- C2 problems are usually complex.
- OOTW problems are usually complex.
- Implies...



### **Review Points**

- C2 + OOTW problems normally require consideration of human issues...check models, tools & data for applicability
- Deterministic tools yield a point estimate.
   This is fine where there is no uncertainty in the data, the methodology, or the problem.
   Otherwise, some method for estimating the variability of results is required.





#### Integrating Discussion on "Methods, Tools and Data"

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